



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/812,402

03/29/2004

Yoji Taniguchi

1324.70198

1711

24978

7590

10/12/2006

GREER, BURNS & CRAIN
300 S WACKER DR
25TH FLOOR
CHICAGO, IL 60606

EXAMINER

BRIGGS, NATHANAEL R

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/812,402

Applicant(s)

TANIGUCHI ET AL.

Examiner

Nathanael Briggs

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 10-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed July 10, 2006 have been fully considered but they are not persuasive.
2. Regarding claims 1-5 and 10-11, Applicant respectfully argues that Kishida is silent regarding at least one of a voltage, a temperature, a luminance, or an irradiation time being controlled as a parameter, wherein the parameter is further controlled under feedback of a thickness of a cell or a height of a spacer formed on one of the substrates before and after injecting the liquid crystal.
3. Regarding claims 1-5 and 10-11, Examiner respectfully draws attention to paragraph 0077 of Kishida. In paragraph 0077, Kishida discloses that differences in the thickness of adjacent cell gaps that may cause unmatched luminance and voltage characteristics in those cells. By adjusting the pre-tilt of the liquid crystal molecules of the adjacent cells, one can compensate for the difference in cell gap thicknesses, allowing for matched luminance, temperature and voltage characteristics. Notice that the pre-tilt is caused by polymerization, which is caused by irradiation of light (see paragraph 0071). Thus, the parameter of irradiation time is adjusted before and after injection of the liquid crystal, to compensate for cell gap differences between adjacent cells. Examiner considers this a feedback process with the thickness of the cell.
4. Further, Applicant argues that Kishida is silent regarding a cell thickness or height of a spacer.

Art Unit: 2871

5. Examiner respectfully draws attention to paragraph 0077, which specifically address a cell gap thickness, which is synonymous with "cell thickness."
6. Further, Applicant argues that Kishida does not consider a parameter "before and after" injection of the liquid crystal, alleging that Kishida merely discloses injecting the liquid crystal as discussed previously.
7. See arguments above in paragraph 3. Rejections of claims 1-5 and 10-11 are therefore maintained.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 1-5 and 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Kishida et al., (Kishida), US 2003/0156247.**
10. Regarding claim 1, Kishida discloses (more specifically in abstract; paragraphs 0071, 0220, 0252, 0291-0298) and shows in Figs. 1-6, a method for producing a liquid crystal display device comprising steps of:
 - sealing a liquid crystal containing a polymerizable component capable of being polymerized with heat or light between a pair of substrates having been disposed as being opposed to each other ([0220], [0295]); and

– polymerizing the polymerizable component by irradiating the liquid crystal with light of a luminance of 50mW/cm² or more at a room temperature for an irradiating time of 100 seconds under application of a voltage of 5V so as to control a pretilt angle and a tilt direction of liquid crystal molecules ([0071]).

11. wherein the voltage or the temperature or the luminance or the irradiation time is controlled as a parameter to obtain prescribed optical characteristics; the parameter that is controlled under feedback of a thickness of a cell or of a height of a pillar spacer formed on one of the pair of substrates before and after injecting the liquid crystal ([0077]). Claim 1 is therefore unpatentable.

12. Regarding claim 2, Kishida discloses the method of claim 1 (see figures 1-6, for instance), wherein the voltage is controlled within a range of 0.1 to 100V ([0071]). Claim 2 is therefore unpatentable.

13. Regarding claim 3, Kishida discloses the method of claim 1 (see figures 1-6, for instance), wherein the temperature is controlled within a range of -30°C to 250°C ([0071]). Claim 3 is therefore unpatentable.

14. Regarding claim 4, Kishida discloses the method of claim 1 (see figures 1-6, for instance), wherein the luminance is controlled within a range of 1 mW/cm² to 10,000 mW/cm² ([0071]). Claim 4 is therefore unpatentable.

15. Regarding claim 5, Kishida discloses the method of claim 1 (see figures 1-6, for instance), wherein the radiation time is controlled between 1 second and 24 hours ([0071]). Claim 5 is therefore unpatentable.

Art Unit: 2871

16. Regarding claim 10, Kishida discloses the method of claim 1 (see figures 1-6, for instance), wherein the parameter is controlled to compensate for a luminance distribution within the panel ([0077]). Claim 10 is therefore unpatentable.

17. Regarding claim 11, Kishida discloses the method of claim 1 (see figures 1-6, for instance), wherein the optical characteristics include gamma characteristic and transmittance upon displaying black ([0293]). Claim 11 is therefore unpatentable.

Conclusion

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathanael Briggs whose telephone number is (571) 272-8992. The examiner can normally be reached on 8:30 AM to 5:00 PM (EST) Monday through Friday.


Art Unit: 2871

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NRB

9/28/2006


ANDREW SCHECHTER
PRIMARY EXAMINER